

CLAIMS

1. Vehicle having a front part, a rear part and a longitudinal axis, and comprising:

- a passenger compartment (8) provided with seats (7)  
5 located at the rear of the passenger compartment;

- a vehicle structure (72) locally defining a roof panel (79) with a closeable opening (77) and a retractable roof, this roof comprising at least two rigid parts (3), (4), (5) free to move with respect to said structure,  
10 respectively a first front part (3), (4), and a second rear part (5), the opening being adapted to house the lateral sealed sliding of said roof parts, the structure further comprising guiding housing and locking elements ((76), (78), (73), (75));

15 - and an add-on modular roof assembly (1) added as a single part onto the vehicle structure, this assembly comprising:

\* the retractable roof and its moving parts (3), (4), (5);

20 \* a retractable roof support body (10) adapted to be positioned facing the guiding elements of the vehicle structure, and to be connected thereto, the roof parts being free to move between an extended position reached at the end of their forward movement, and in which these parts  
25 cover the passenger compartment and are substantially in line one behind the others, and a folded position reached at the end of their rearward movement and in which said parts are offset from each other and retracted into a storage space located behind the seats (7), the roof parts

then preferably occupying a substantially vertical position, adjacent to each other;

- and a roof parts movement mechanism ((12), (13), (40), (50) connected to these roof parts and supported on the support body (10) for moving the roof parts, with respect to the roof opening, between their extended and folded positions, once the modular roof assembly is positioned inside the vehicle.

2. Vehicle according to claim 1, characterized in that one of the guiding housing and locking elements provided on the vehicle structure (72) and the support body of the modular roof assembly comprises two cradles (75) aligned perpendicular to the longitudinal axis (1a) of the vehicle, and the other of said guiding housing and locking elements and said support body comprises two trunnions (73) adapted to fit into the cradles, to enable pivoting of said modular roof assembly (1) with respect to the vehicle structure (72).

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3. Vehicle according to claim 2 characterized in that:

- the seats (7) of the vehicle are installed on the structure so that they can be tilted forwards, and

- the vehicle further includes means (100), (101), (103) of actuating the modular roof assembly, these actuation means comprising a control (100) accessible to the vehicle user to tilt the modular roof assembly (1) between the folded position of the roof parts when they are arranged adjacent to each other, substantially vertically behind the seats, and a position tilted forwards in the

passenger compartment when said seats themselves are tilted forwards.

4. Vehicle according to claim 3 characterized in that:

5       - the support body (10) and the movement mechanism (12), (13), (40), (50) for the roof parts define two side blocks (10a) and thus extend essentially laterally and in the immediate vicinity of the roof parts in the folded position to clear an available space between said side  
10   blocks;

      - the roof storage area (9) communicates with a vehicle trunk (70) in which luggage is loaded;

      - and the vehicle further comprises stop means (90) to stop the modular roof assembly in a substantially  
15   horizontal position of the roof parts, thus superposed with respect to each other, these roof parts then clearing an additional available storage space underneath.

5. Vehicle according to any one of the previous claims  
20   characterized in that the roof parts movement mechanism comprises pivoting arms (40), (50) which are, at one end, hinged with respect to the support body (10), at two different locations, and are connected, at an other end, for one of said pivoting arms to the second roof rear part  
25   (5) and, for the other, to the first roof front part (4).

6. Vehicle according to claim 5 characterized in that the second roof rear part (5) is a roof moveable element comprising the rear window (5a) and capable of being moved  
30   between the extended and folded positions.

7. Vehicle according to any one of the previous claims characterized in that the roof parts (3), (4), (5) enter a casing (11) fixed to the modular roof assembly (1) when they reach their said folded position in which they are arranged substantially vertically.

8. Vehicle according to claim (7) characterized in that:

10 - the vehicle is provided with a rear shelf (92) moving between a substantially horizontal position when said roof parts (3), (4), (5) are in their folded position, adjacent to each other, and a substantially vertical position, tilted forwards, during extension or retraction of said roof parts;

15 - and when in its substantially horizontal position, when the roof parts are in the folded position inside said housing casing (11), this rear shelf (92) substantially closes the upper part of the casing.

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9. Vehicle according to claim 8 or claim 7 characterized in that at the rear of the vehicle, when the roof parts are in the folded position, the housing casing (11) comprises a mobile panel (11c) installed free to pivot in its lower part about a fixed part (11a) connected and fixed to the support body (10) of the modular roof assembly.

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